Grier, Gina

From: Tapp, Joshua
Sent: Tuesday, April 30, 2013 2:25 PM
To: Kemp, Lachala; Grier, Gina
Subject: FW: Greenwire - States scramble as EPA shifts research monitors into regulatory mode

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From: Bryan, David
Sent: Tuesday, April 30, 2013 12:55 PM
To: R7 Senior Staff; Algoe-Eakin, Amy; Gargas, Toni; Jay, Michael; Smith, John; Smith, Mark A.; Tapp, Joshua; Weber, Rebecca; Werner, Leslye
Subject: Greenwire - States scramble as EPA shifts research monitors into regulatory mode

States scramble as EPA shifts research monitors into regulatory mode

Greenwire - Jason Plautz, E&E reporter

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A little-noticed change in U.S. EPA air policy has turned a national pollution-monitoring network that has been providing data to researchers for 22 years into a regulatory tool, leaving states scrambling to figure out the implications.

At issue are 90 air monitors in the Clean Air Status and Trends Network, or CASTNET, launched in 1991 by the landmark Clean Air Act amendments to track long-term trends in acid rain pollutants as well as rural ozone, a component of smog.

The network was the exclusive domain of scientists until 2010, when EPA's Office of Air and Radiation "upgraded" the CASTNET monitors to allow them to be used for regulatory work -- to determine compliance with the ozone standard. So data collected by the monitors will go into EPA's 2011-2013 designations of areas that are in nonattainment for ozone and thus at risk for penalties.

State regulators, which were slow to notice the change, are now trying to understand what it means. And so far, the shift has claimed one station.

Tom Gross, chief of air monitoring and planning for the Kansas Department of Environment and Health, said he only learned last month that the state's only CASTNET monitor at the Konza Prairie site near Manhattan had a regulatory purpose.

"In this particular case, this is not a location where we would put a compliance monitor," Gross said in an interview. "This is a rural area on a research site where we're researching burning practices on the prairie. While we want research-type monitors in locations that are in harm's way, they're there for research."

After discussions with regional and federal EPA officials, Gross said, the state shut down the monitor. The Nature Conservancy, which owns the Konza Prairie site, and Kansas State University, which conducts research there, agreed, and the monitor was turned off at the beginning of April.

"I was very disappointed that we were essentially forced to take it offline because of the circumstances," said John Blair, a KSU biology professor who conducts research on the Konza Prairie site.

"The work that CASTNET does in terms of monitoring trends is critical," he said. "The longer we collect this data, the more valuable it becomes, and this is information we just wouldn't have without these monitors."

Nine other state regulatory agencies contacted by *Greenwire* said they're similarly assessing how to adjust to the change. Officials in Tennessee and Kentucky, for example, said representatives of EPA's Region 4 office in Atlanta only notified them of the changes in March; they're awaiting a conference call in the coming weeks to discuss the implications.

EPA did not make a CASTNET official available for comment but said in a statement that most air quality monitors have multiple purposes. EPA's State and Local Air Monitoring Stations (SLAMS) network has roughly 4,000 stations to measure criteria pollutants for compliance.

"Today, CASTNET ozone monitors provide information on ozone concentrations in rural areas while also providing data that can be used to help determine whether an area is meeting EPA's ozone standards," EPA said.

But researchers are concerned that more states could follow Kansas and take monitors offline or relocate them, poking holes in a nationwide data-collection net.

'Really egregious for them ... to pull the plug'

Craig Volland, the air quality chairman of the Kansas Sierra Club chapter, said he was shocked to see data collection at Konza Prairie stop at the beginning of the month. The site, he said, had unusually high ozone levels, in part due to rangeland burning on cattle farms.

Kansas is a latecomer to CASTNET, joining in 2002. Under the roughly $4.5-million-a-year CASTNET program, the federal government -- the National Park Service and the Bureau of Land Management both contribute monitors to the program -- pays for equipment and maintenance in exchange for a place to set up monitors. Researchers get the data, which are also released in an annual report.

The Konza Prairie research facility is a 13.5-square-mile swath of grassland near the KSU campus. It's one of 26 national Long Term Ecological Research Network sites and offers a space for KSU researchers to investigate all manner of ecological impacts, including the high-profile research into the impact of range burning.

Every spring, depending on the weather, cattle ranchers burn off old crops and grasses to clear space for new crops. Although the practice has been used for decades in the Flint Hills, which stretch across the eastern half of the state, researchers are still looking into how it affects air quality and the rest of the ecosystem.

The CASTNET monitor, predictably, has picked up higher pollution levels in burn season, but Volland says his own research has shown some unexpected readings.

He said he found 43 incidences since 2002 when readings spiked above the daily ozone limits, two-thirds of them outside the burn season. He has hypothesized that the spikes could come from warm air masses coming from the south or power plants and oil refineries in nearby states.

"But it's not up to me to figure that out," Volland said. "But instead of shutting down monitors, the state ought to be studying this. It's really egregious for them to take the initiative and pull the plug."

The Kansas Department of Environment and Health's Gross explained that the decision was not that simple.

"We do support CASTNET and we've reached out to EPA, the Nature Conservancy and KSU to try to sort this out. We're willing to work with these folks if they want to do more research monitoring," he said.

In a statement, the EPA Region 7 office in Kansas City, Kan., said the monitor was removed at the request of the Nature Conservancy and that the office "strives to be a 'good neighbor' by respecting the Prairie's owner's decision."

"Region 7 is confident that Kansas and EPA maintain a monitoring system in that provides needed public-health protections for Kansans," an EPA spokesman said. The state and regional office both say they are looking for ways to either relocate or replace the research monitor.

Eliminating the site will not greatly disrupt regulatory monitoring of National Ambient Air Quality Standards, or NAAQS, Gross and EPA officials said.

Existing monitors in Topeka and Cedar Bluffs offer similar readings, and Gross explained that they have actually seen more rangeland burning impacts in Wichita, about 120 miles away, than at Konza.

And even with the spikes in ozone from field burns and in the summer, Kansas still met the NAAQS requirements, which are done by averaging data over several years.

It's not illegal for the state to move or adjust its monitoring sites without public notice, Gross said; the state has changed its network throughout the course of the year. An annual network plan is made public with the opportunity for comment, but Gross said for this move to happen without public comment was not unusual.

But Volland said the closure reeked of the state trying to avoid high readings linked to the field burns. He noted that Kansas had recently requested that EPA toss out some high ozone readings that it said could be linked to the prairie burns (EPA complied).

Ron Trewyn, vice president of research at KSU, said eliminating the monitor "seemed like the safest approach" because it "did not feel prudent to potentially have some days out of compliance without fully understanding the implications."

"There certainly would have been a broader dialogue about this if we knew this was going to be a regulatory site," he said. "It's a little troubling, since you'd expect a decision like this to be made with all of the stakeholders."

But the result, KSU professor Blair said, is a disruption in collecting data that just won't be available elsewhere.

The Konza Prairie monitor, he said, was collecting data on not just ozone levels, but nitrogen and sulfur deposition and its meteorological impact. Konza Prairie was the only site in Kansas and one of just four in neighboring states, potentially leaving a hole in the data.

"These are the kinds of measurements that complement the kind of research we're already doing," Blair said. "The nice thing about CASTNET is that the sites are distributed across the country. By participating in a network like that, you can see national trends. That's not possible if you don't have this uniform sampling and uniform methods."

States adapt

EPA won't say whether any other CASTNET monitors had been shut down, and no states contacted by *Greenwire* had taken similar action to Kansas or were aware of any other closures. But many are still evaluating just what the new regulatory collections mean.

Drew Elliott, a spokesman for the North Carolina Department of Environment and Natural Resources, said the state had been notified six months ago that its four CASTNET monitors could be used for regulation. Since then, Elliott said, the state has asked to review EPA's quality assurance procedures and audit their collected data.

"Currently we don't believe that any of these stations pose a problem with regard to attainment because they are mostly in rural areas," Elliott said in an email. "However, if EPA lowers the ozone standard in the future -- like it previously proposed -- some of these areas could potentially exceed the standard and be designated as non-attainment."

Stephanie McCarthy, manager of the technical services branch for Kentucky's Department of Environmental Protection, likewise said that the state is trying to assess its five CASTNET sites. She said the state was notified of the regulatory change at a managers meeting in March and that a conference call with a federal official was being scheduled for the coming weeks.

"This is not something we've really been involved with, so I'm looking forward to communicating directly with the head of the program to find out the specifics of the sites and all that," McCarthy said.

Other states said they're comfortable with the change and have no plans to change or close any sites.

"The three CASTNET sites in Colorado have been operating for many years and provide a good record in areas that the state does not monitor," said Gordon Pierce, manager of the technical services program at the Colorado Department of Public Health and the Environment. "Our preference was for EPA to upgrade them to regulatory."

But losing even a few CASTNET sites, researchers say, could mar the whole program. The sites collect data in largely rural areas, as opposed to the urban areas where regulatory monitors are set up. And with the high-tech monitors collecting more than just ozone data, it's possible that a whole batch of research on meteorological data, depositions and other air chemicals could be lost without the program.

And the assessments come at a time when cash-strapped states are already thinking about how best to continue to monitor air pollution while cutting back on officers. The sequestration cuts that went into effect earlier this year have slashed $11.5 million from federal grants to states, which could mean a yearlong delay in establishing the next phase of a new monitoring program for nitrogen oxides at busy highways (*Greenwire*, April 24).

An annual American Lung Association report released last week for the first time put data for every county online, leaving blank those that did not have an air monitor.

Janice Nolen, the group's assistant vice president of national policy, said the omissions were meant to alert people to the fact that in more than 3,000 counties, only 900 had monitors.

"We can only talk about available information, but many counties just don't have that information for a variety of reasons," Nolen said.

Although state agencies say monitors are currently collecting enough data to present a big picture, Kansas air regulator Gross maintains that more would be better.

"In a perfect world, we'd monitor every county," he said, "but those things are so expensive that we can't."